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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,516	09/30/2003	John M. Borg	HSJ920030153US3	6099
7590 06/30/2004 Bracewell & Patterson, L.L.P. P.O. Box 969 Austin, TX 78767-0969			EXAMINER OSELE, MARK A	
			ART UNIT 1734	PAPER NUMBER

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,516

Applicant(s)

BORG ET AL.

Examiner

Mark A Osele

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-20 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 3-6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01152004</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Moore or Wojnarowski et al. in view of Nishiguchi. Moore each show the method of thermal debonding of workpieces comprising the following steps: providing a carrier, 12, with workpieces, 11, that are bonded to the carrier with a thermally activated adhesive; reactivating the thermally activated adhesive; aligning a tool, 28, with the workpieces; and engaging one of the workpieces with the tool and displacing it from the carrier.

Wojnarowski et al. also shows the method of thermal debonding of workpieces comprising the following steps: providing a carrier, 30, with workpieces, 10a-10k, that are bonded to the carrier with a thermally activated adhesive; reactivating the thermally activated adhesive; aligning a tool, 200, with the workpieces; and engaging one of the workpieces, 10e, with the tool and displacing it from the carrier.

Nishiguchi teaches the method of removing a workpiece from an adhesive tape and applying the workpiece to to a detainment carrier, 14, for further processing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the workpieces of either Moore or Wojnarowski et al. on a detainment

carrier because Nishiguchi shows this to be an effective device for carrying workpieces so the tool can be used to remove additional workpieces.

Regarding claim 2, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control all of the environmental factors affecting removal of the workpieces to ensure that the fragile workpieces are safely removed and reassigned without damaging them.

Regarding claim 7, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realign the workpieces in the detainment mechanism so the workpiece is oriented as needed for various further processing steps.

Regarding claim 8, Wojnarowski et al. discloses that the workpieces can be any electrical device (column 3, line 60 to column 4, line 7) and pico-sized slider rows are well known electrical devices in the semiconductor industry also fabricated from wafers similar to the workpieces of Moore.

Regarding claim 9, Nishiguchi shows the workpieces spaced at different pitches on the carrier and the detainment mechanism (See Fig 1A).

Allowable Subject Matter

3. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 10-20 are allowed.

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5. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art suggests removing the workpiece with a beveled tooth to push the workpieces off the carrier. In addition, none of the prior art shows placing the workpieces between a block and a retention feature removably mounted to the block.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A Osele whose telephone number is 571-272-1235. The examiner can normally be reached on Mon-Fri 9:30-6:00.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorialla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MARK A. OSELE
PRIMARY EXAMINER
June 28, 2004